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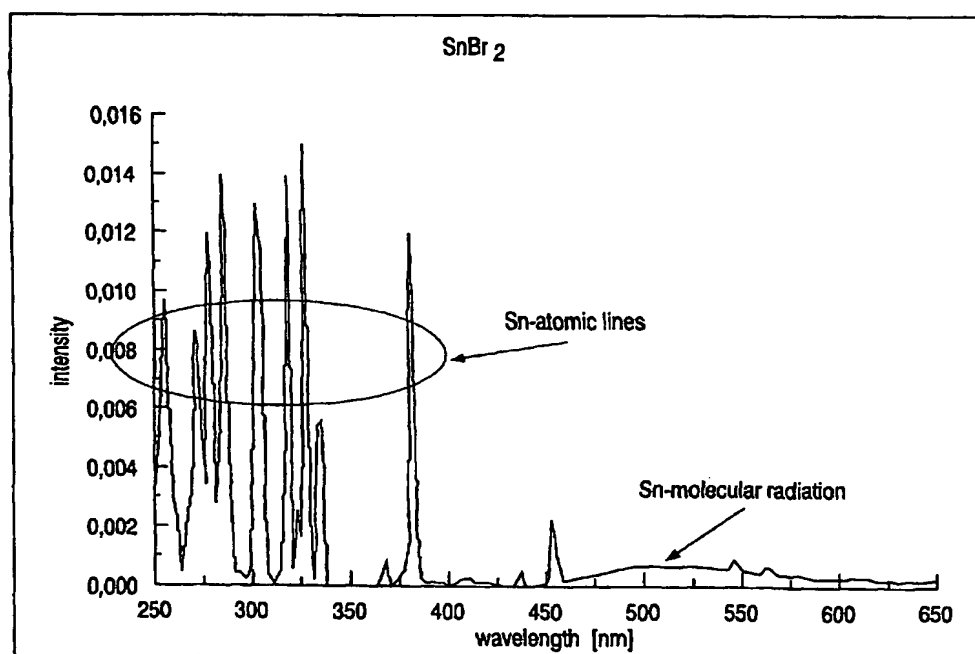
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[Continued on next page]

(54) Title: **LOW-PRESSURE GAS DISCHARGE LAMP WITH GAS FILLING CONTAINING TIN**



(57) Abstract: A low-pressure gas discharge lamp equipped with a gas discharge vessel containing an inert gas filling as the buffer gas, with electrodes and with means for generating and maintaining a low-pressure gas discharge, is described, wherein the lamp contains at least one tin halide.



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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y A	US 4 710 679 A (BUDINGER A BOWMAN ET AL) 1 December 1987 (1987-12-01) claims 1,3 column 3, lines 8-11 figure 1 column 3, lines 35-37	1,5-7,9, 10 8 4
X A	US 2 765 416 A (BEESE NORMAN C ET AL) 2 October 1956 (1956-10-02) column 2, lines 4-14 column 4, lines 10-21 figure 5	1,6,7,9, 10 4
Y	EP 0 407 160 A (EMI PLC THORN) 9 January 1991 (1991-01-09) page 4, lines 15-36 figure 1	8

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4710679	A	01-12-1987	NONE	
US 2765416	A	02-10-1956	NONE	
EP 0407160	A	09-01-1991	DE 69012460 D1	20-10-1994
			DE 69012460 T2	11-05-1995
			EP 0407160 A2	09-01-1991
			JP 2875860 B2	31-03-1999
			JP 3067455 A	22-03-1991